

SOFCs can theoretically operate on hydrocarbon fuels

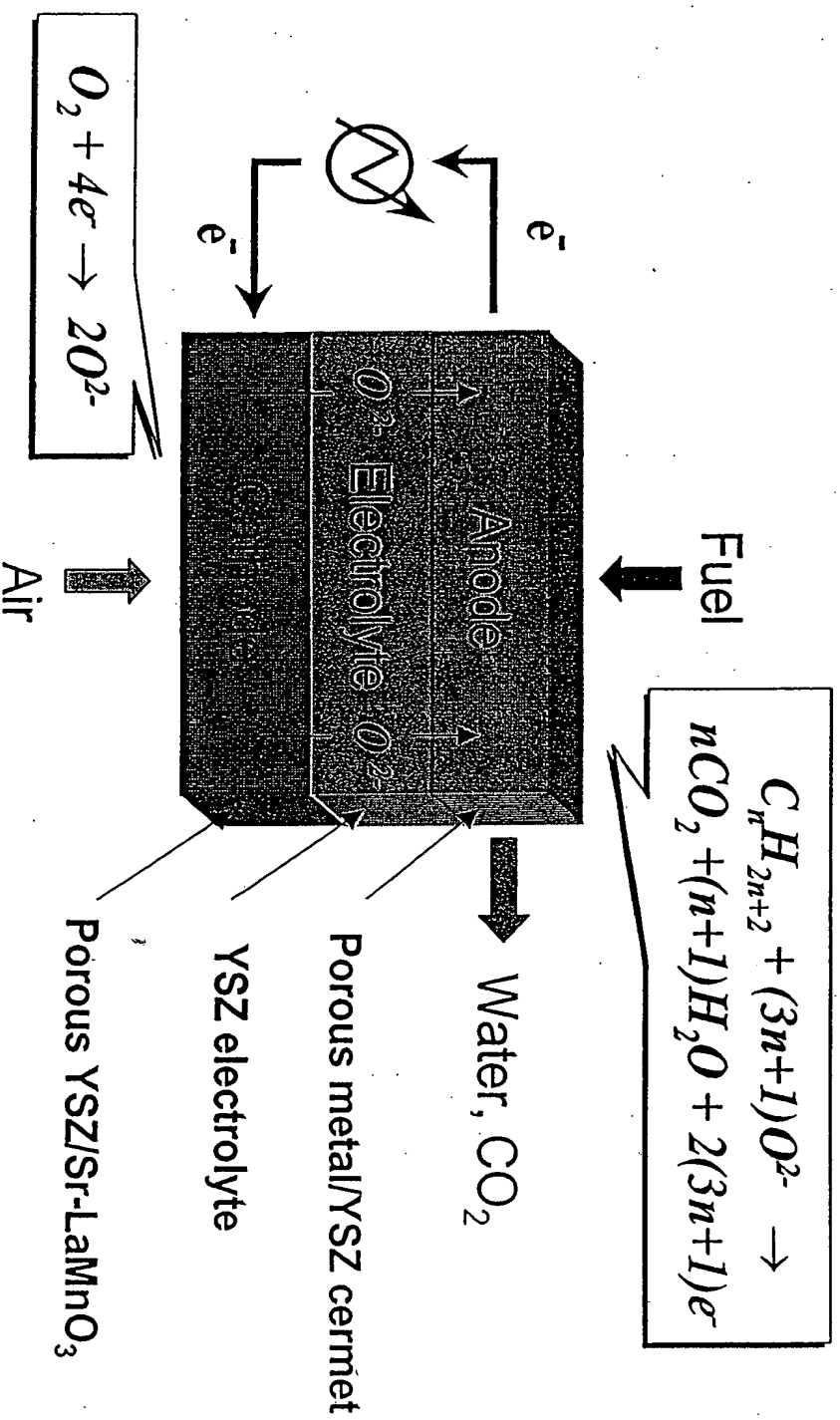


FIGURE 1A



Stable in liquid fuels

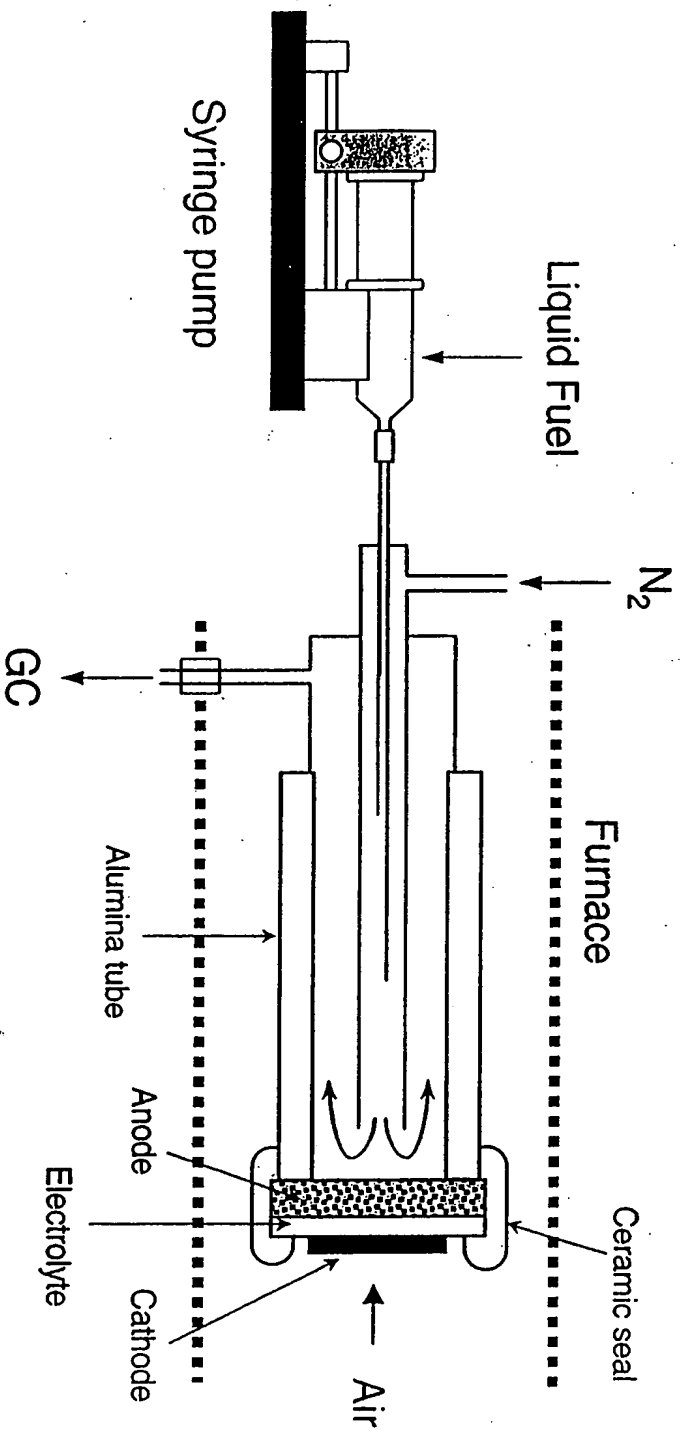
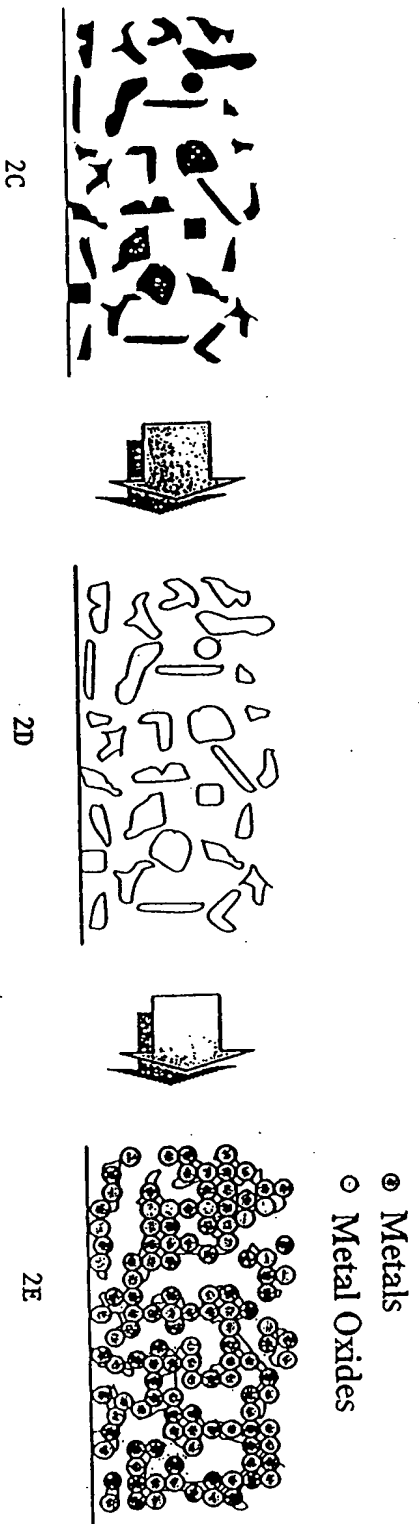
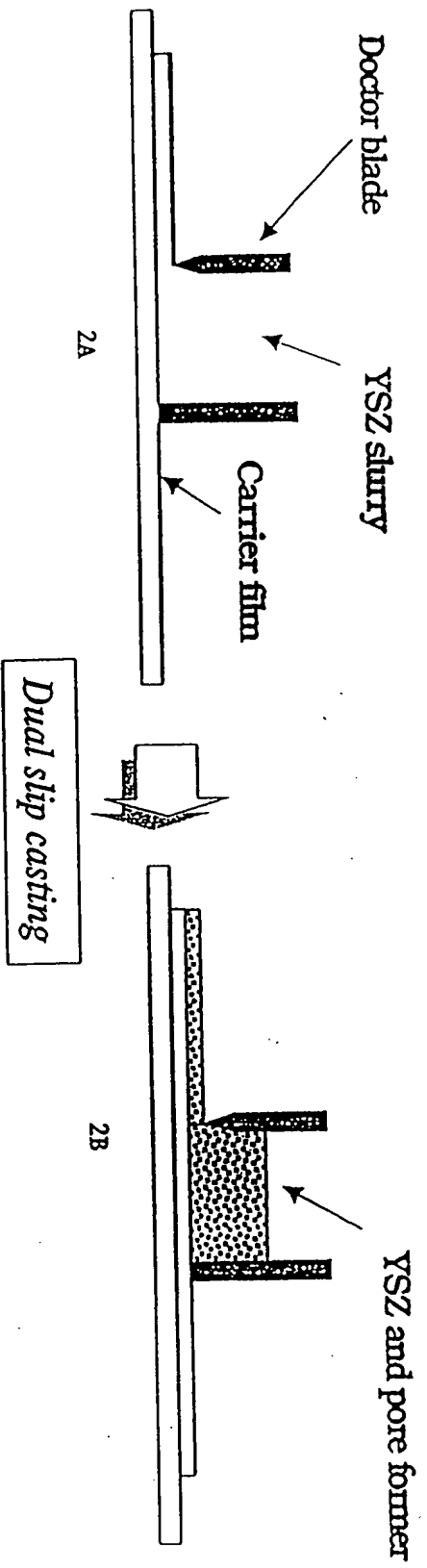


FIGURE 1B

Fabrication methods:



Sinter ~1500°C

Impregnation

● Metals
○ Metal Oxides



FIGURES
2A - 2E



We can remake Ni cermets.

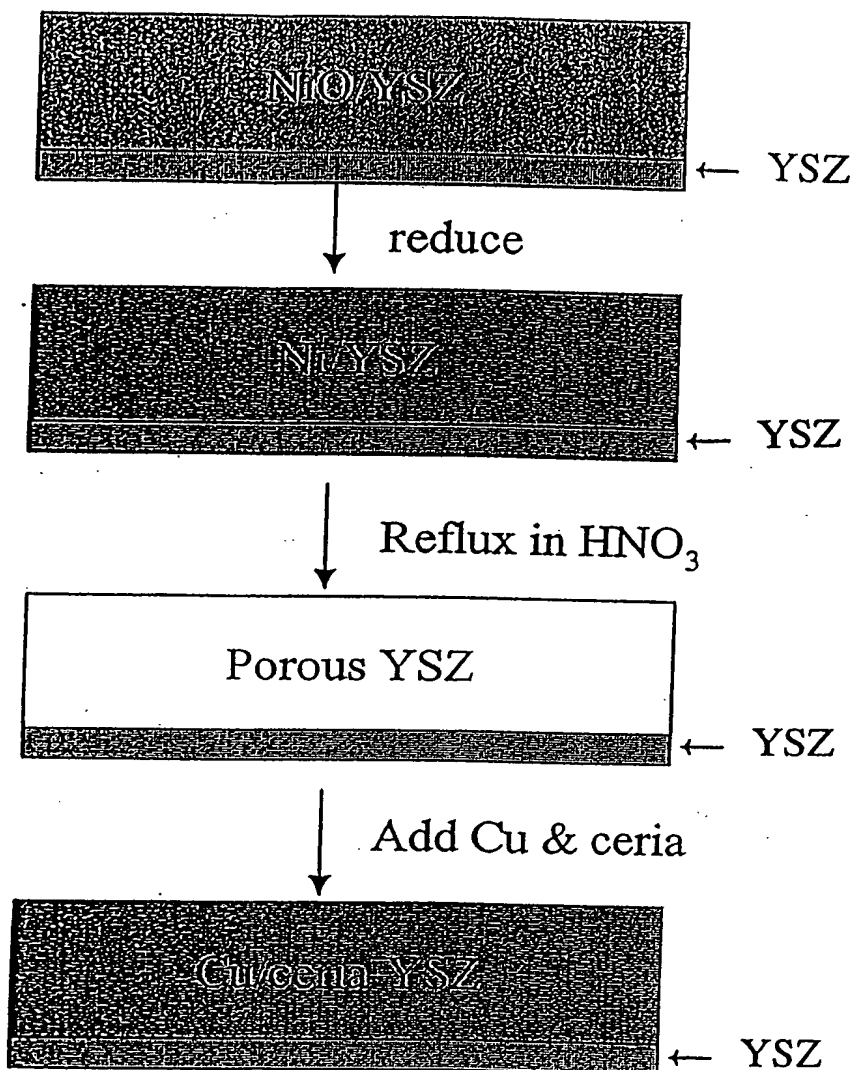


FIGURE 3

Can we make cells that are stronger?

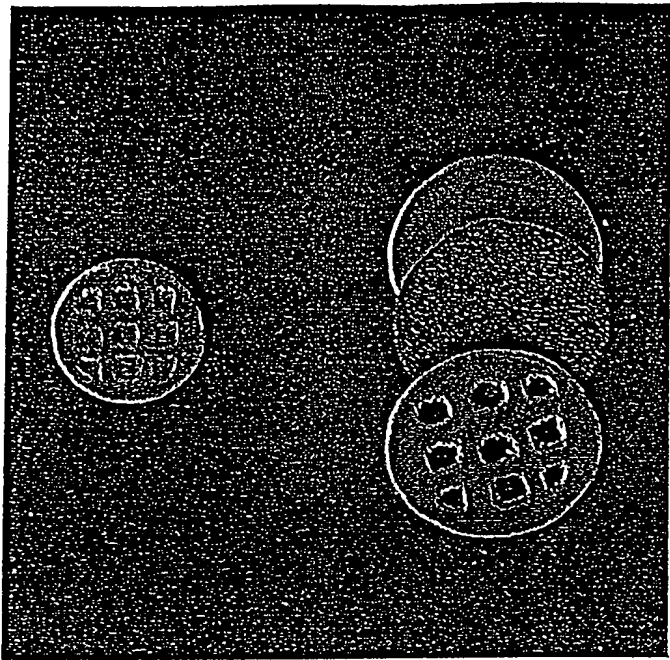


FIGURE 4A

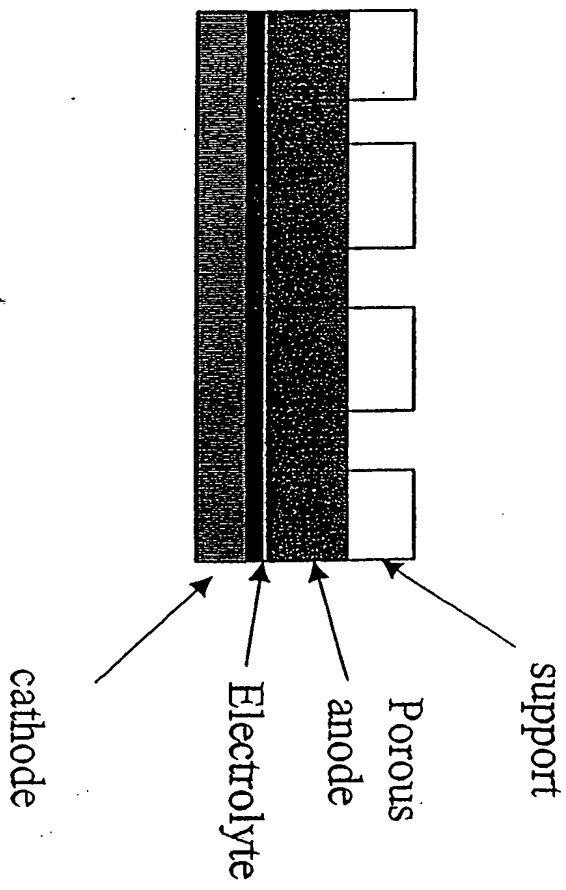


FIGURE 4B



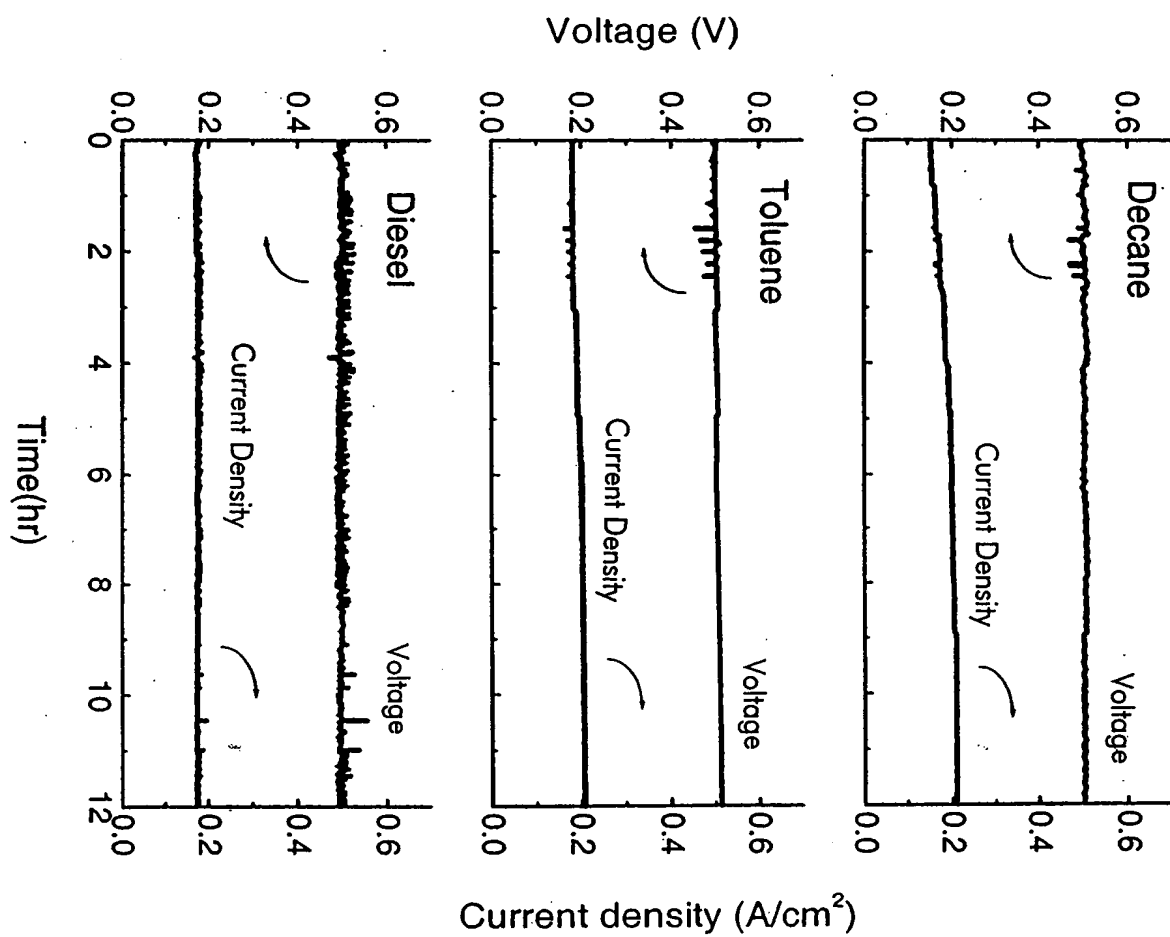


FIGURE 5

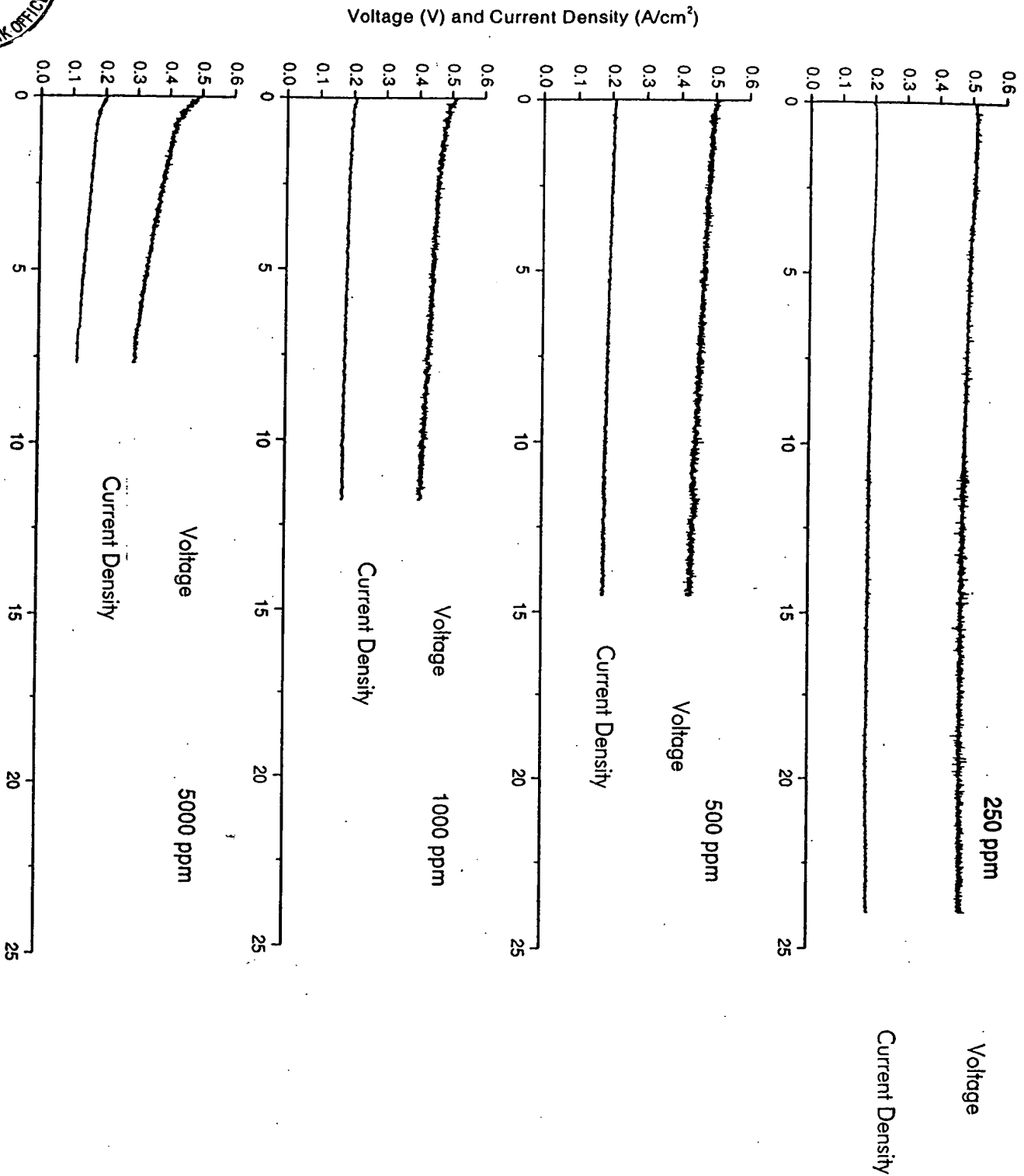


FIGURE 6



Current Density (A/cm^2)

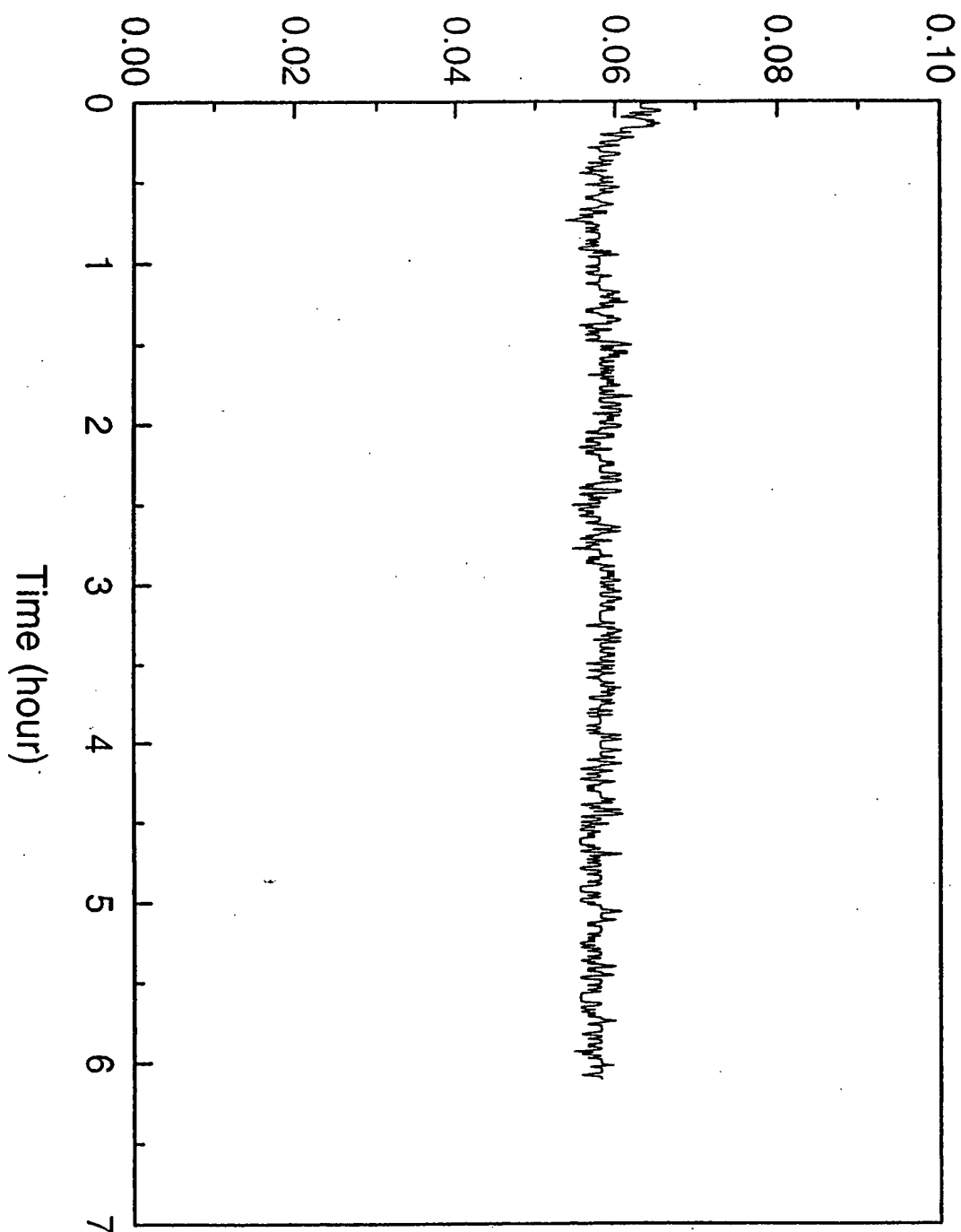


FIGURE 7



Voltage (V) and Current Density (A/cm^2)

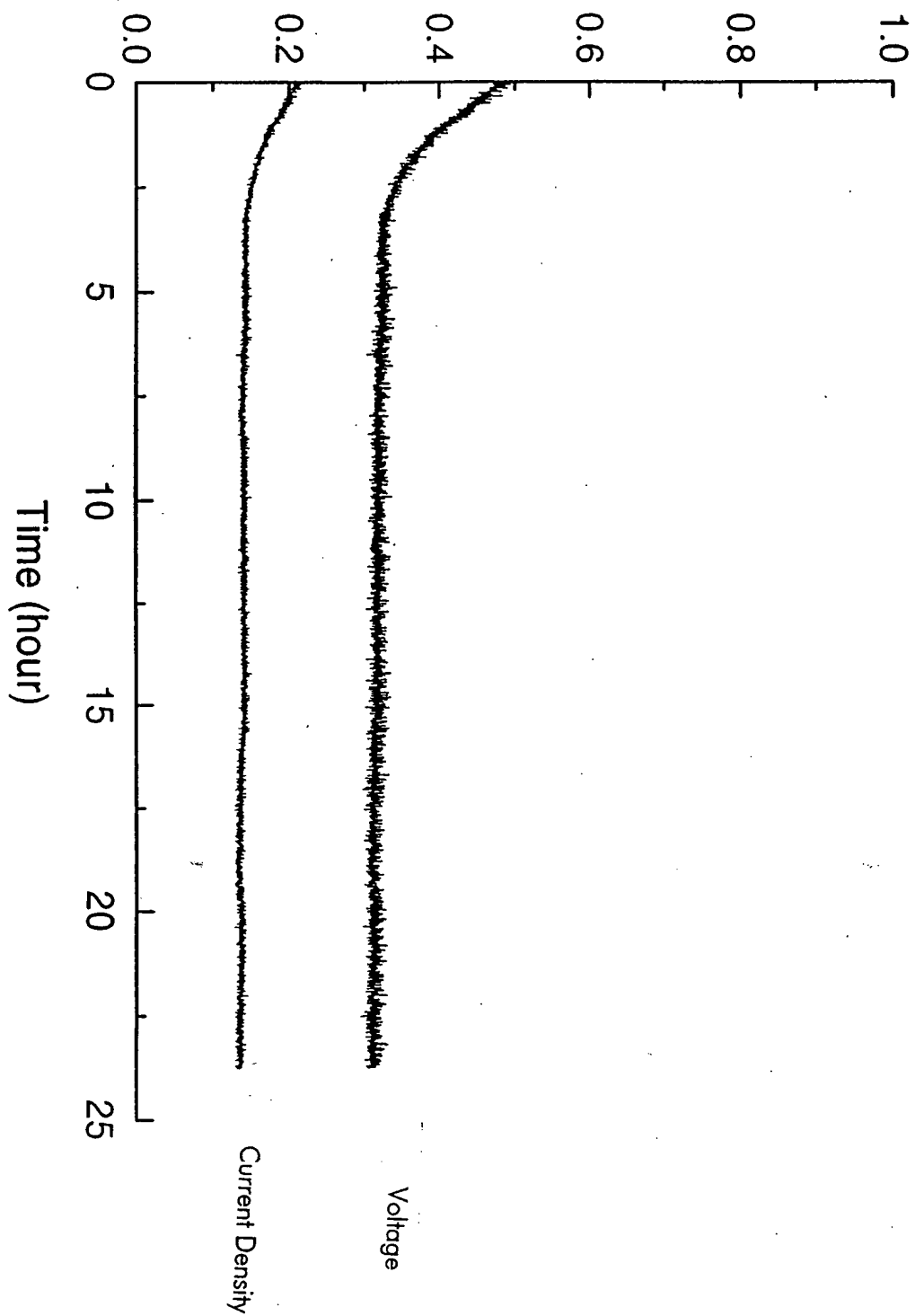


FIGURE 8

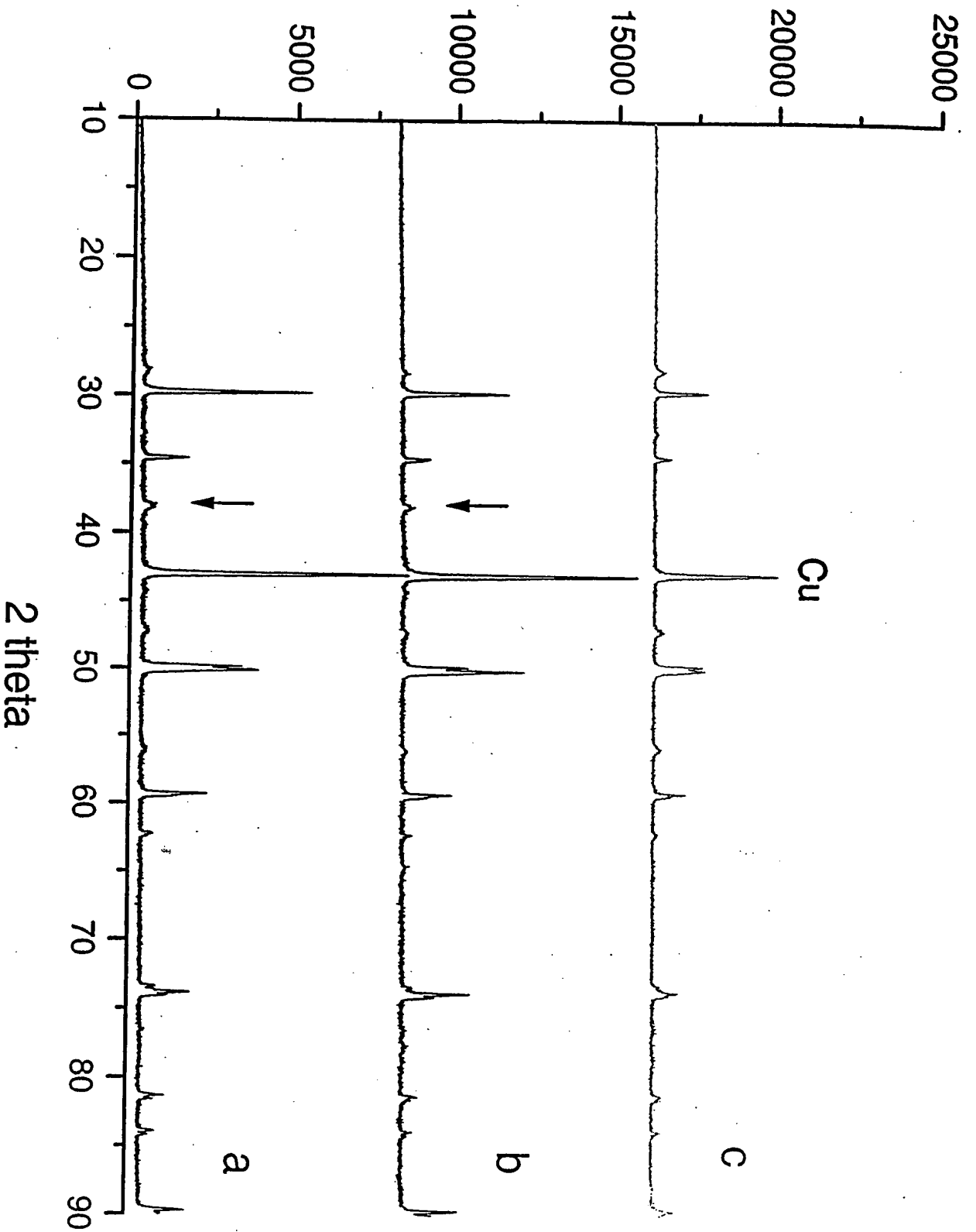


FIGURE 9



100% Gasoline

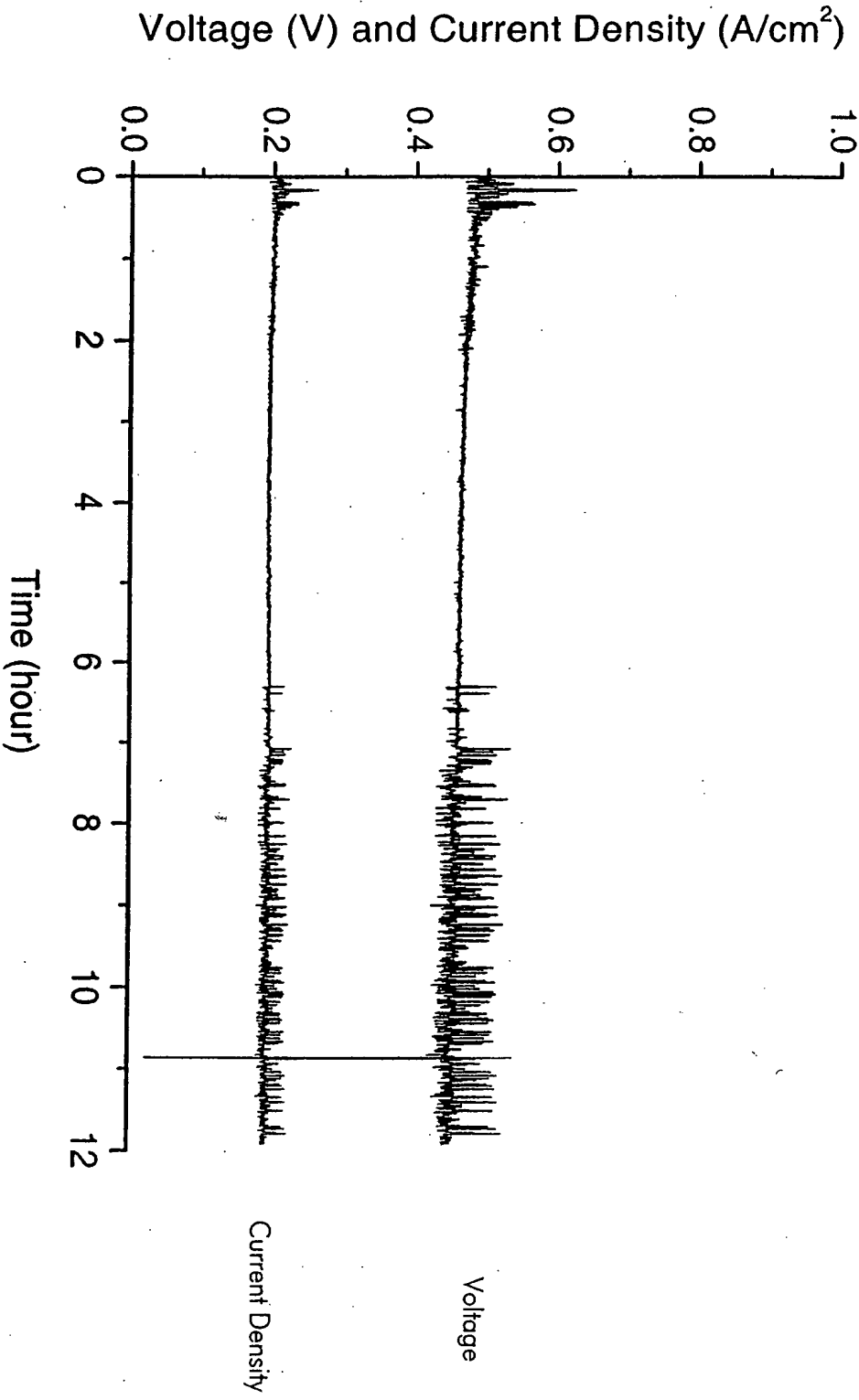


FIGURE 10

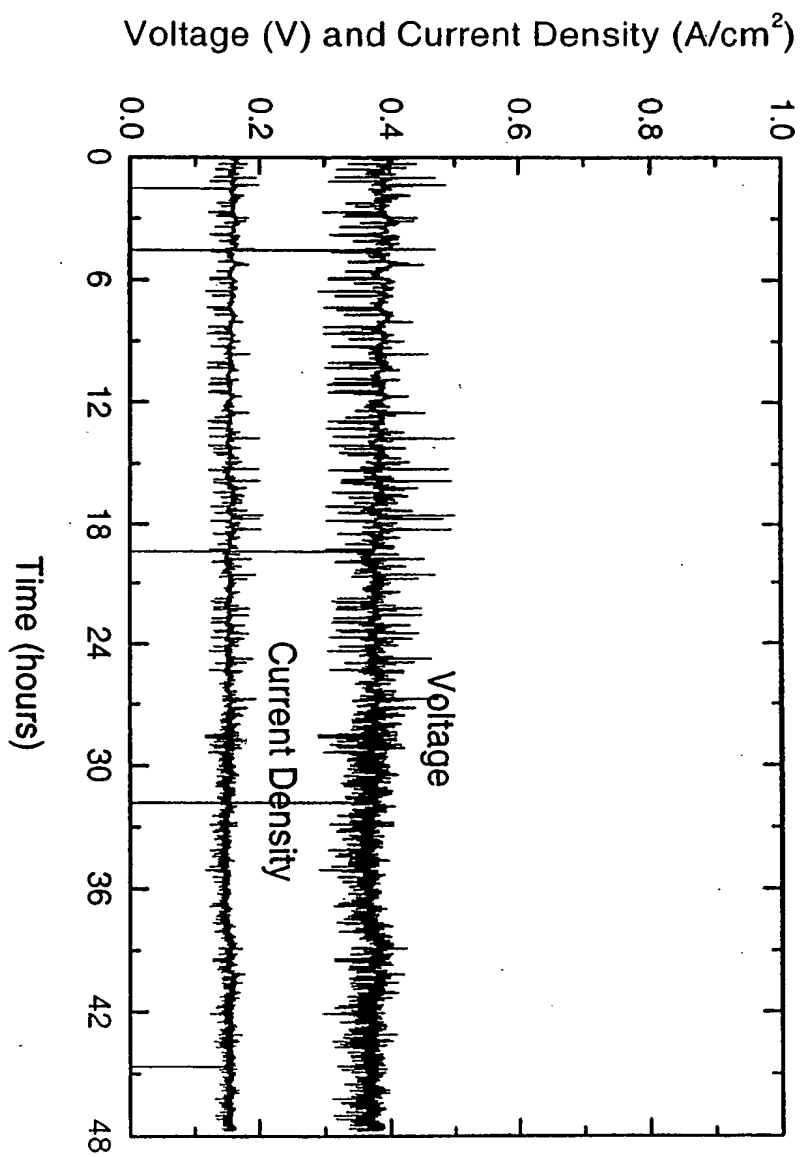


FIGURE 11

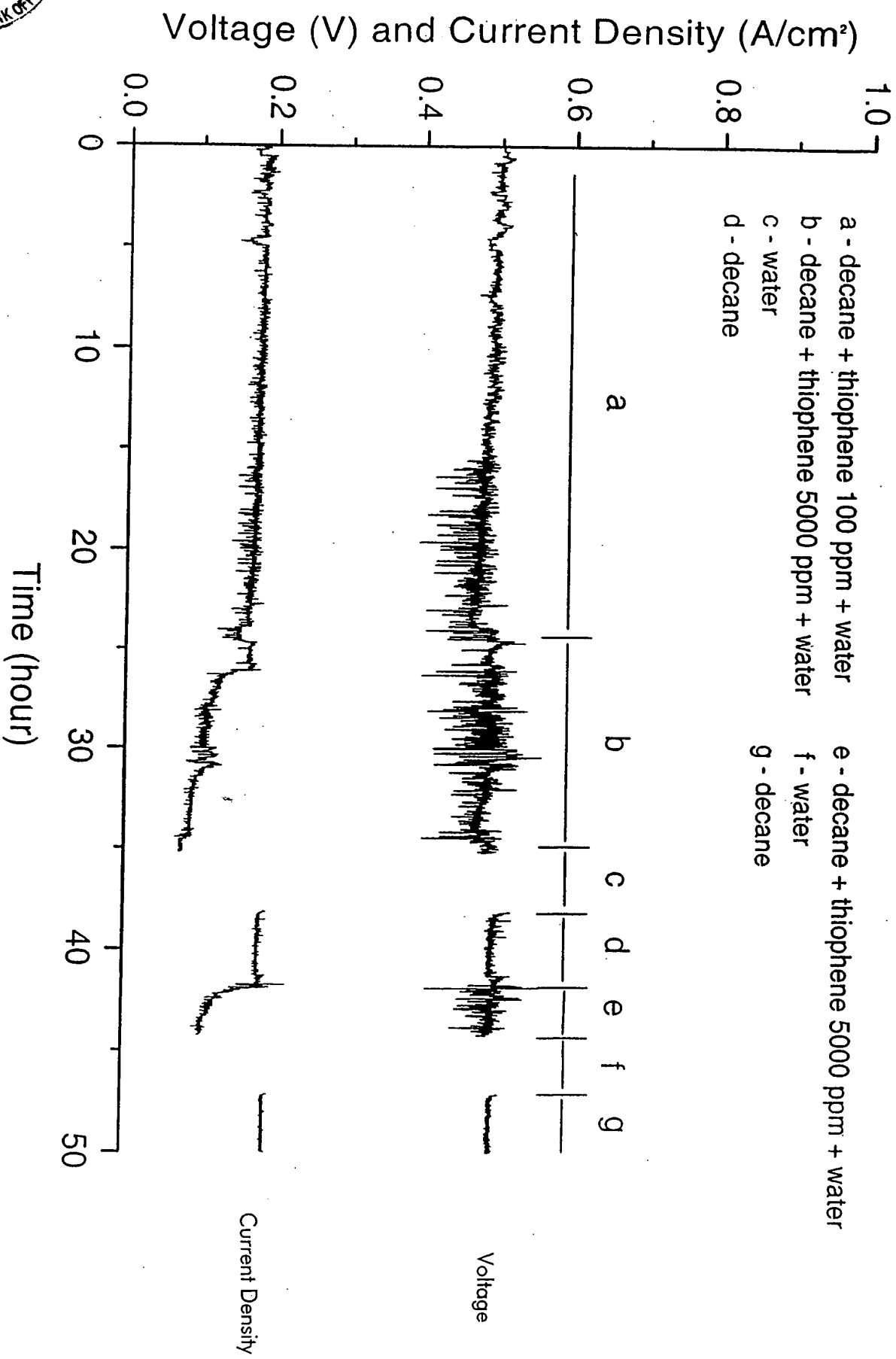


FIGURE 12

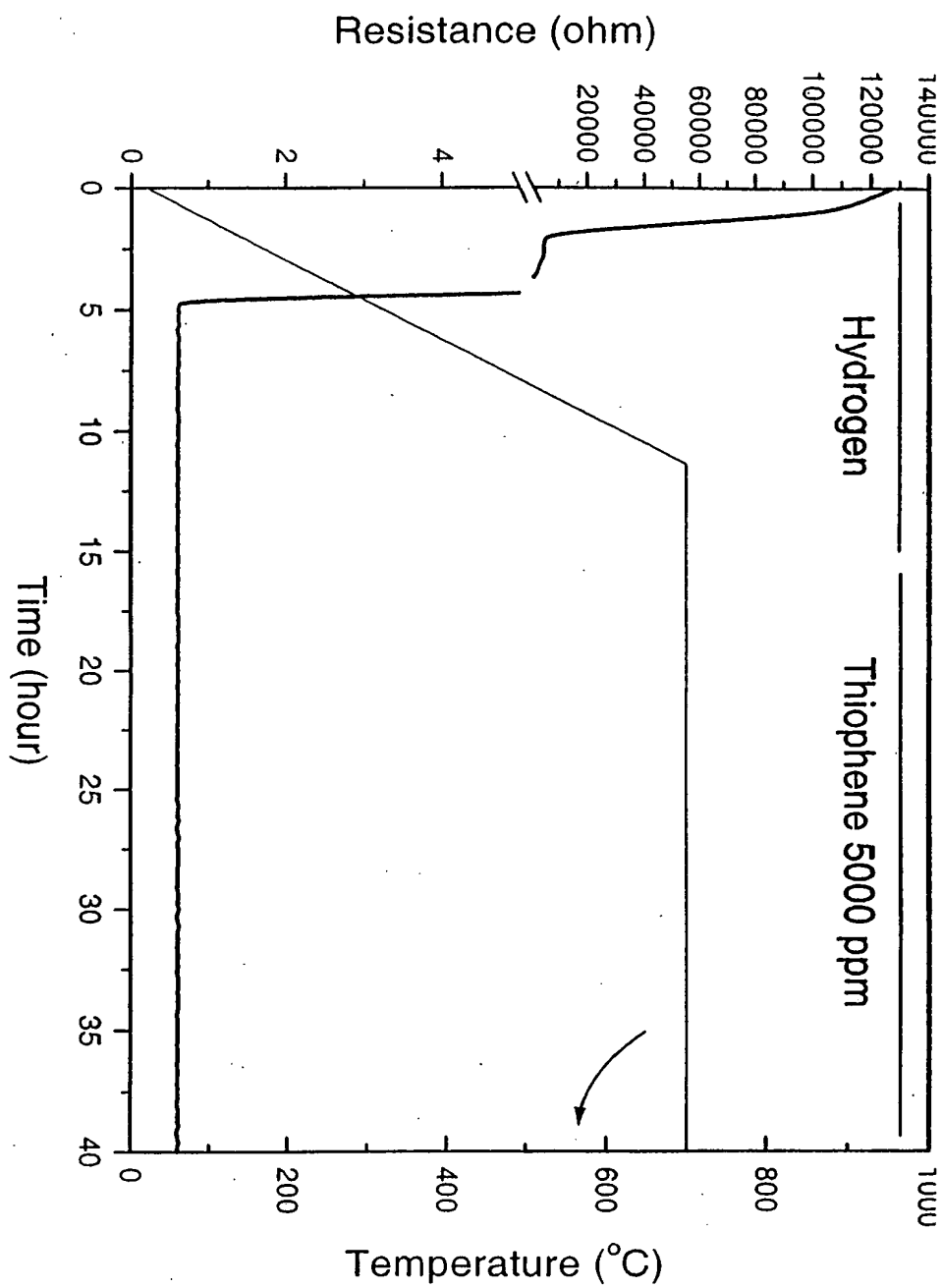


FIGURE 13



Cell made from 40%Ni/YSZ
cermet, after removal of Ni and
addition of ceria & Cu.

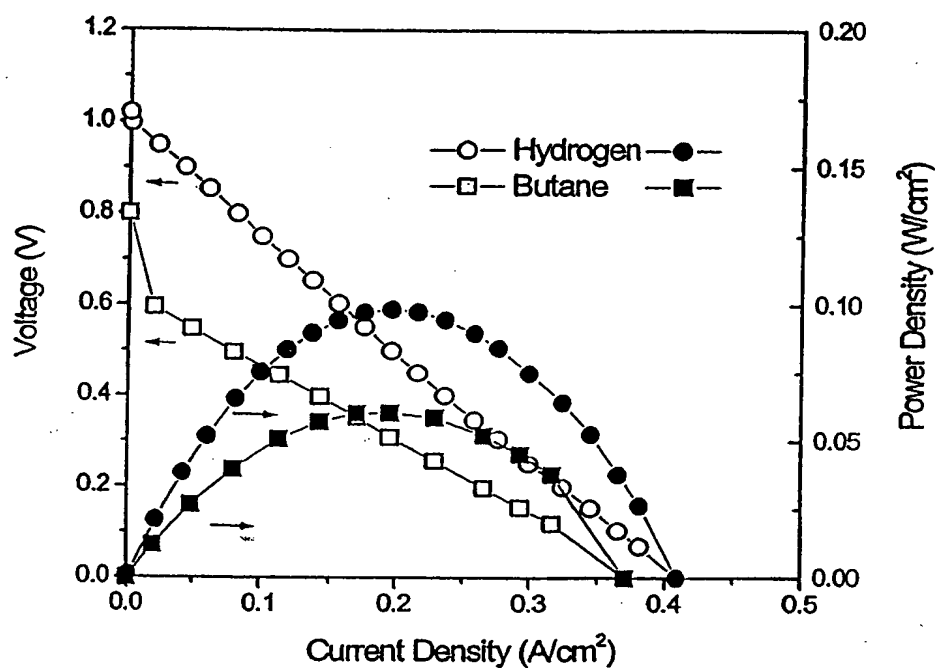


FIGURE 14